APPENDIX A

CURRICULUM VITAE: Jalkanen Sirpa Tuulikki

Sex: Female
Born: February 28, 1954
Married: Markku Jalkanen, 1975

Place of Birth: Jyväskylä, Finland
Children: Born 76, 78, 79

EDUCATION AND TRAINING

Education:
Faculty of Medicine, Turku University; Degrees received:
-M.D. 1979
-Ph.D. (Immunology) 1983
-Docent (equivalent to rehabilitation) in Immunobiology 1987
-Specialist in Clinical Microbiology 1990

Postdoctoral Training:
Physician, Municipal Health Centre, February 1979-March 1980
Residency, Department of Pediatrics, Turku University, April 1980-January 1981
Residency in Clinical Microbiology, Department of Medical Microbiology, Turku University, January 1981-July 1983
Postdoctoral Fellow, Department of Pathology, Stanford University, 1983-1986

Professional/Leadership Experience:
Head of Laboratory, Department of Medical Microbiology 1986-1989
Junior Investigator of the Finnish Academy 1989-1991
Senior Investigator of the Finnish Academy 1991-1994
Senior Investigator of the National Public Health Institute 1994-1996
Elected as the Chairman of the Department of Immunology, University of Helsinki, 1997-2001 (on leave of absence)
Professor of Immunology, University of Turku 2001-
Research Professor of the Finnish Academy 1996-2006
Director of the Receptor Programme (one of the three main programs at University of Turku, Medical Faculty) 1996-
Director of the MediCity Research Laboratory (Research Unit of the Medical Faculty of Turku University consisting 15 research groups) 1996-
Director of the National Center of Excellences in Cell Traffic 2000-2005 and in Host Defence 2008-2013

Teaching experience: workshops (immunology and bacteriology) and lecturing (immunology) for medical students 1981-

RESEARCH PRIZES, HONOURS AND MAJOR GRANTS

Prizes:

Duodecim Society: Young Scientist Award 1987; Eli Lilly Gastroenterology Award 1990; Medix Award 1991 for the best publication 1990 (work done in Finland) in biomedicine; Maud Kuistila Prize 1997 (for excellent work as the supervisor of young scientists); Elias Lönnrot Medal for achievements in science, teaching and developing biotechnology, 2004; Anders Jahre prize, 2005, Tillandz prize 2006 and 2007, Äyräpää Prize (the major prize in medicine in Finland) 2008

Honours:
The Rheumalecture of the year 1994 (the Finnish Society for Rheumatologists); member of the Science Academy of Finland 1998 -; EMBO member 2000- ; member of the Norwegian Academy of Science and Letters 2002-

Major research grants as principal investigator:
Jane Coffin Childs Memorial Fund for Medical Research Fellowship, 1984-1986
Finnish Academy: 'Leukocyte-endothelial cell interaction in malignancies and at sites of inflammation' 1989-1999; Grant as a Center of Excellence 2000-2005; and 2008-2013
The Sigrid Juselius Foundation: 'Adhesion receptors in malignancies and inflammation' 1989-2009
Finnish Cancer Union:'The role of cell surface receptors in malignancies and in efficacy of TIL (tumor infiltrating lymphocytes) therapy' 1987-2009
Coordinator of an EU Consortium, QLG7-CT-1999-00295: Therapeutic Utilization of a Novel Enzyme with Unique adhesion Properties (TUNEUP) 2000-2004

EDITORIAL BOARD MEMBERSHIPS

Member of the Editorial Board of the European Journal of Immunology 1995-2000
Member of the Editorial Board of the Scandinavian Journal of Immunology 1999-
Member of the Executive Committee of the European Journal of Immunology 2000-

OTHER ACADEMIC AND PROFESSIONAL MERITS

Pre-examiner for doctoral dissertations: 15 times
Official opponent for doctoral dissertations: 11 times
Theses supervised or co-supervised: 19

1. Palojoki Eeva 3/1995 2. Hänninen Arno 5/1995 3. Salmi Marko 5/1995 4. Aho Riitta 11/1995 5. Ristamäki Raija 12/1995 6. Airas Laura 6/1996 7. Wuorela Maarit 10/1996 8. Arvilommi (Kujari) Anna-Maija 5/1998 9. Bono Petri 10/1998 10. Jaakkola Kimmo 1/ 2000 11. Tohka Sami 10/2001 12. Henttinen Tiina 11/2001 13. Irjala Heikki 12/2002 14. Jaakkola Ilkka 5/2003 15. Maula Sanna 12/2003 16. Kurkijärvi Riikka 11/2004 17. Niemelä Jussi 3/2006 18. Jan Kiss 10/2008 19. Auvinen Kaisa 02/2009

Reviewer: Professorships in Immunology and Pathology (for Norwegian. Swedish, American and British Universities)

Referee for numerous foreign grant proposals: the Welcome Trust, Arthritis Research Campaign (England), EMBO, Estonian Academy, the Royal Swedish Academy of

Sciences, Norwegian Research Council, European Science Foundation, European Research Council

Member of the Board: Orion (the biggest pharmaceutical company in Finland)
Member of the Board: Emil Aaltonen Foundation
Member of the Advisory Board: Sigrid Juselius Foundation
Chairman of the Advisory Board: Central Union of the Finnish Insurance Companies (Science Awards)
Member of the Board: the Finnish Genome Center
Member of the Advisory Board: BioFund
Member of the Research and Education Boards at University of Turku
Member of the Board: Foundation of the Finnish Cancer Institute
Vice chairman of the Science Academy of Finland
Member of the Advisory Board for Norwegian (CIR) and Swedish (MIVAC) Centers of Excellences

Referee for about 100 manuscripts/year

PUBLICATIONS

Articles in refereed international scientific journals

a) Original articles

1. Jalkanen M, Jalkanen S. Immunological detection of proteins after isoelectric focusing in thin layer agarose gel: a specific application for the characterization of immunoglobulin diversity. **J Clin Lab Immunol** 10:225-228, 1983.

2. Jalkanen S, Granfors K, Jalkanen M, Toivanen P. Immune capacity of the chicken bursectomized at 60 hr of incubation: surface immunoglobulin and B-L (La-like) antigen-bearing cells. **J Immunol** 130:2038-2041, 1983.

3. Jalkanen S, Granfors K, Jalkanen M, Toivanen P. Immune capacity of the chicken bursectomized at 60 hours of incubation: failure to produce immune, natural, and autoantibodies in spite of immunoglobulin production. **Cell Immunol** 80:363-373, 1983.

4. Eerola E, Jalkanen S, Granfors K, Toivanen A. Immune capacity of the chicken bursectomized at 60 hours of incubation: mitogen-induced cell proliferation and immunoglobulin secretion. **J Immunol** 131:120-124, 1983.

5. Jalkanen S. Immune capacity of the chicken bursectomized at 60 hours of incubation: transplantation of bone marrow cells of the bursectomized chickens into cyclophosphamide-treated newly hatched recipients. **Eur J Immunol** 13:779-785, 1983.

6. Jalkanen S, Korpela R, Granfors K, Toivanen P. Immune capacity of the chicken bursectomized at 60 hr of incubation: cytoplasmic immunoglobulins and histological findings. **Clin Immunol Immunopathol** 30:41-50, 1984.

7. Eerola E, Granfors K, Jalkanen S, Toivanen A. Immune capacity of the chicken bursectomized at 60 hr of incubation: effect of adherent cells on the production of immunoglobulins and specific antibodies *in vitro*. **Clin Immunol Immunopathol** 31:202-211, 1984.

8. Eerola E, Jalkanen S, Granfors K, Toivanen A. Immune capacity of the chicken bursectomized at 60 H of incubation. Effect of bursal epithelial cells and bursal epithelium-conditioned medium on the production of immunoglobulins and specific antibodies in vitro. **Scand J Immunol** 19:493-500, 1984.

9. Jalkanen S, Jalkanen M, Granfors K, Toivanen P. Defect in the generation of light-chain diversity in bursectomized chickens. **Nature** 311:69-71, 1984.

10. Jalkanen ST, Butcher EC. In vitro analysis of the homing properties of human lymphocytes: developmental regulation of functional receptors for high endothelial venules. **Blood** 66:577-582, 1985.

11. Navarro RF, Jalkanen ST, Hsu M, Søenderstrup-Hansen G, Goronzy J, Weyand C, Fathman CG, Clayberger C, Krensky AM, Butcher EC. Human T cell clones express functional homing receptors required for normal lymphocyte trafficking. **J Exp Med** 162:1075-1080, 1985.

12. Jalkanen S, Steere AC, Fox RI, Butcher EC. A distinct endothelial cell recognition system that controls lymphocyte traffic into inflamed synovium. **Science** 233:556-558, 1986.

13. Veromaa T, Jalkanen S, Granfors K, Toivanen P. Inability to transfer immune unresponsiveness of chickens bursectomized at 60 hours of incubation. **Transplantation** 42:197-199, 1986.

14. Jalkanen ST, Bargatze RF, Herron LR, Butcher EC. A lymphoid cell surface glycoprotein involved in endothelial cell recognition and lymphocyte homing in man. **Eur J Immunol** 16:1195-1202, 1986.

15. Veromaa T, Vainio O, Eerola E, Lehtonen L, Jalkanen S, Toivanen P. T cell function in chickens bursectomized at 60 hours of incubation. **Transplantation** 43:533-537, 1987.

16. Jalkanen S, Bargatze RF, de los Toyos J, Butcher EC. Lymphocyte recognition of high endothelium: antibodies to distinct epitopes of an 85-95-kD glycoprotein antigen differentially inhibit lymphocyte binding to lymph node, mucosal, or synovial endothelial cells. **J Cell Biol** 105:983-990, 1987.

17. Korpela R, Jalkanen S, Paljärvi L, Toivanen P. Early embryonic bursectomy induces eosinophilia. **J Immunol** 139:3915-3917, 1987.

18. Jalkanen S, Jalkanen M, Bargatze R, Tammi M, Butcher EC. Biochemical properties of glycoproteins involved in lymphocyte recognition of high endothelial venules in man. **J Immunol** 141:1615-1623, 1988.

19. Veromaa T, Vainio O, Jalkanen S, Eerola E, Granfors K, Toivanen P. Expression of B-L and Bu-1 antigens in chickens buresctomized at 60 h of incubation. **Eur J Immunol** 18:225-230, 1988.

20. Wu NW, Jalkanen S, Streeter PR, Butcher EC. Evolutionary conservation of tissue-specific lymphocyte-endothelial cell recognition mechanisms involved in lymphocyte homing. **J Cell Biol** 107:1845-1851, 1988.

21. Jalkanen S, Nash GS, de los Toyos J, MacDermott RP, Butcher EC. Human lamina propria lymphocytes bear homing receptors and bind selectively to mucosal lymphoid high endothelium. **Eur J Immunol** 19:63-68, 1989.

22. Granfors K, Jalkanen S, von Essen R, Lahesmaa-Rantala R, Isomäki O, Pekkola-Heino K, Merilahti-Palo R, Saario R, Isomäki H, Toivanen A. Yersinia antigens in synovial-fluid cells from patients with reactive arthritis. **N Engl J Med** 320:216-221, 1989.

23. de los Toyos J, Jalkanen S, Butcher EC. Flow cytometric analysis of the Hermes homing-associated antigen on human lymphocyte subsets. **Blood** 74:751-760, 1989.

24. Forsberg UH, Ala-Kapee MM, Jalkanen S, Andersson LC, Schröder J. The gene for human lymphocyte homing receptor is located on chromosome 11. **Eur J Immunol** 19:409-412, 1989.

25. Forsberg U, Jalkanen S, Schröder J. Assignment of the human lymphocyte homing receptor gene to the short arm of chromosome 11. **Immunogenetics** 29:405-407, 1989.

26. Jalkanen S, Aho R, Kallajoki M, Ekfors T, Nortamo P, Gahmberg C, Duijvestin A, Kalimo H. Lymphocyte homing receptors and adhesion molecules in intravascular malignant lymphomatosis. **Int J Cancer** 44:777-782, 1989.

27. Jalkanen S, Joensuu H, Klemi P. Prognostic value of lymphocyte homing receptor and S phase fraction in non-Hodgkin's lymphoma. **Blood** 75:1549-1556, 1990.

28. Jalkanen S, Saari S, Kalimo H, Lammintausta K, Vainio E, Leino R, Duijvestijn AM, Kalimo K. Lymphocyte migration into the skin: the role of lymphocyte homing receptor (CD44) and endothelial cell antigen (HECA-452). **J Invest Dermatol** 94:786-792, 1990.

29. Wuorela M, Jalkanen S, Pelliniemi LJ, Toivanen P. Nurse cells of the bursa of Fabricius: do they exist? **Eur J Immunol** 20:913-917, 1990.

30. Mansikka A, Jalkanen S, Sandberg M, Granfors K, Lassila O, Toivanen P. Bursectomy of chicken embryos at 60 hours of incubation leads to an oligoclonal B cell compartment and restrected Ig diversity. **J Immunol** 13:779-785, 1990.

31. Granfors K, Jalkanen S, Lindebrg AA, Mäki-Ikola O, Von Essen R, Lahesmaa-Rantala R, Isomäki H, Saario R, Arnold WJ, Toivanen A. Salmonella lipopolysaccharide in synovial cells from patienys with reactive arthritis. **Lancet** 335:685-688, 1990.

32. Joensuu H, Klemi PJ, Jalkanen S. Biologic progression in non-Hodgkin's lymphoma. A flow cytometric study. **Cancer** 65:2564-2571, 1990.

33. Jalkanen S, Joensuu H, Söderström K-O, Klemi P. Lymphocyte homing and clinical behavior of non-Hodgkin's lymphoma. **J Clin Invest** 87:1835-1840, 1991.

34. Joensuu H, Klemi PJ, Söderström K-O, Jalkanen S. Comparison of S-phase fraction, working formulation, and Kiel classification in non-Hodgkin's lymphoma. **Cancer** 68:1564-1571, 1991.

35. Granfors K, Jalkanen S, Toivanen P, Koski J, Lindebrg AA. Bacterial lipopolysaccharide in synovial fluid cells in shigella triggered reactive arthritis. **J Rheumatol** 19:500, 1992.

36. Jalkanen S, Jalkanen M. Lymphocyte CD44 binds the COOH-terminal heparin-binding domain of fibronectin. **J Cell Biol** 116:817-825, 1992.

37. Salmi M, Jalkanen S. Regulation of L-selectin expression on cultured bone marrow leukocytes and their precursors. **Eur J Immunol** 22:835-843, 1992.

38. Salmi M, Granfors K, Leirisalo-Repo M, Hämäläinen M, MacDermott R, Leino R, Havia T, Jalkanen S. Selective endothelial binding of interleukin-2-dependent human T-cell lines derived from different tissues. **Proc Natl Acad Sci USA** 89:11436-11440, 1992.

39. Hänninen A, Jalkanen S, Salmi M, Toikkanen S, Nikolakaros G, Simell O. Macrophages, T cell receptor usage, and endothelial cell activation in the pancreas at the onset of insulin-dependent diabetes mellitus. **J Clin Invest** 90:1901-1910, 1992.

40. Salmi M, Jalkanen S. A 90-kilodalton endothelial cell molecule mediating lymphocyte binding in humans. **Science** 257:1407-1409, 1992.

41. Klemi PJ, Alanen K, Jalkanen S, Joensuu H. Proliferating cell nuclear antigen (PCNA) as a prognostic factor in non-Hodgkin's lymphoma. **Br J Cancer** 66:739-743, 1992.

42. Salmi M, Grön-Virta K, Sointu P, Grenman R, Kalimo H, Jalkanen S. Regulated expression of exon v6 containing isoforms of CD44 in man: downregulation during malignant transformation of tumors of squamocellular origin. **J Cell Biol** 122:431-442, 1993.

43. Hänninen A, Salmi M, Simell O, Jalkanen S. Endothelial cell-binding properties of lymphocytes infiltrated into human diabetic pancreas. Implications for pathogenesis of IDDM. **Diabetes** 42:1656-1662, 1993.

44. Airas L, Salmi M, Jalkanen S. Lymphocyte-vascular adhesion protein-2 is a novel 70-kDa molecule involved in lymphocyte adhesion to vascular endothelium. **J Immunol** 151:4228-4238, 1993.

45. Salmi M, Kalimo K, Jalkanen S. Induction and function of vascular adhesion protein-1 at sites of inflammation. **J Exp Med** 178:2255-2260, 1993.

46. Joensuu S, Klemi PJ, Toikkanen S, Jalkanen S. Glycoprotein CD44 expression and its association with survival in breast cancer. **Am J Pathol** 143:867-874, 1993.

47. Joensuu H, Ristamäki R, Klemi PJ, Jalkanen S. Lymphocyte homing receptor (CD44) expression is associated with poor prognosis in gastrointestinal lymphoma. **Br J Cancer** 68:428-432, 1993.

48. Palojoki E, Toivanen P, Jalkanen S. Chicken B cells adhere to the CS-1 site of fibronectin throughout their bursal and postbursal development. **Eur J Immunol** 23:721-726, 1993.

49. Wuorela M, Jalkanen S, Toivanen P, Granfors K. *Yersinia* lipopolysaccharide is modified by human monocytes. **Infect Immun** 61:5261-5270, 1993.

50. Salmi M, Granfors K, MacDermott R, Jalkanen S. Aberrant binding of lamina propria lymphocytes to vascular endothelium in inflammatory bowel diseases. **Gastroenterology** 106:596-605, 1994.

51. Aho R, Jalkanen S, Kalimo H. CD44-hyaluronate interaction mediates *in vitro* lymphocyte binding to the white matter of the central nervous system. **J Neuropathol Exp Neurol** 53:295-302, 1994.

52. Joensuu H, Ristamäki R, Söderström K-O, Jalkanen S. Effect of treatment on the prognostic value of S-phase fraction in non-Hodgkin's lymphoma. **J Clin Oncol** 12:2167-2175, 1994.

53. Skurnik M, El Tahir Y, Saarinen M, Jalkanen S, Toivanen P. YadA mediates specific binding of enteropathogenic *Yersinia enterocolitica* to human intestinal submucosa. **Infect Immun** 62:1252-1261, 1994.

54. Ristamäki R, Joensuu H, Salmi M, Jalkanen S. Serum CD44 in malignant lymphoma: an association with treatment response. **Blood** 84:238-243, 1994.

55. Salmi M, Andrew DP, Butcher EC, Jalkanen S. Dual binding capacity of mucosal immunoblasts to mucosal and synovial endothelium in humans: dissection of the molecular mechanisms. **J Exp Med** 181:137-149, 1995.

56. Salmi M, Jalkanen S. Different forms of human vascular adhesion protein-1 (VAP-1) in blood vessels *in vivo* and in cultured endothelial cells: implications for lympohocyte-endothelial cell adhesion models. **Eur J Immunol** 25:2803-2812, 1995.

57. Salmi M, Grenman R, Grenman S, Nordman E, Jalkanen S. Tumor endothelium selectively supports binding of IL-2-propagated tumor-infiltrating lymphocytes. **J Immunol** 154:6002-6012, 1995.

58. Ristamäki R, Joensuu H, Söderström K-O, Jalkanen S. CD44v6 expression in non-Hodgkin's lymphoma: an association with low histological grade and poor prognosis. **J Pathol** 176:259-267, 1995.

59. Palojoki E, Jalkanen S, Toivanen P. Sialyl LewisX carbohydrate is expressed differentially during avian lymphoid cell development. **Eur J Immunol** 25:2544-2550, 1995.

60. Airas L, Hellman J, Salmi M, Bono P, Puurunen T, Smith DJ, Jalkanen S. CD73 is involved in lymphocyte binding to the endothelium: characterization of lymphocyte-vascular adhesion protein 2 identifies it as CD73. **J Exp Med** 182:1603-1608, 1995.

61. Salmi M, Jalkanen S. Human vascular adhesion protein1 (VAP-1) is a unique sialoglycoprotein that mediates carbohydrate-dependent binding of lymphocytes to endothelial cells. **J Exp Med** 183:569-579, 1996.

62. McNab G, Reeves JL, Salmi M, Hubscher S, Jalkanen S, Adams DH. Vascular adhesion protein 1 mediates binding of T cells to human hepatic endothelium. **Gastroenterology** 110:522-528, 1996.

63. Kantele JM, Arvilommi H, Kontiainen S, Salmi M, Jalkanen S, Savilahti E, Westerholm M, Kantele A. Mucosally activated circulating human B cells in diarrhea express homing receptors directing them back to the gut. **Gastroenterology** 110:1061-1067, 1996.

64. Hänninen A, Salmi M, Simell O, Andrew D, Jalkanen S. Recirculation and homing of lymphocyte subsets: dual homing-specificity of β7-integrin^{high}-lymphocytes in nonobese diabetic mice. **Blood** 88:934-944, 1996.

65. Airas L, Jalkanen S. CD73 mediates adhesion of B cells to follicular dendritic cells. **Blood** 88:1755-1764, 1996.

66. Hänninen A, Salmi M, Simell O, Jalkanen S. Mucosa-associated (β7-integrin^{high}) lymphocytes accumulate early in the pancreas of NOD mice and show aberrant recriculation behavior. **Diabetes** 45:1173-1180, 1996.

67. Arvilommi A-M, Salmi M, Kalimo K, Jalkanen S. Lymphocyte binding to vascular endothelium in inflamed skin revisited: a central role for vascular adhesion protein-1 (VAP-1). **Eur J Immunol** 26:825-833, 1996.

68. Ristamäki R, Joensuu H, Grön-Virta K, Salmi M, Jalkanen S. Origin and function of circulating CD44 in non-Hodgkin's lymphoma. **J Immunol** 158:3000-3008, 1997.

69. Aho R, Kalimo H, Salmi M, Smith D, Jalkanen S. Binding of malignant lymphoid cells to the white matter of the human central nervous system: role of different CD44 isoforms, β1, β2 and β7 integrins, and L-selectin. **J Neuropathol Exp Neurol** 56:557-568, 1997.

70. Hänninen A, Jaakkola I, Salmi M, Simell O, Jalkanen S. Ly-6C regulates endothelial adhesion and homing of $CD8^+$ T cells by activating integrin-dependent adhesion pathways. **Proc Natl Acad Sci USA** 94:6898-6903, 1997.

71. Soukka T, Salmi M, Joensuu H, Häkkinen L, Sointu P, Koulu L, Kalimo K, Klemi P, Grénman R, Jalkanen S. Regulation of CD44v6-containing isoforms during proliferation of normal and malignant epithelial cells. **Cancer Res** 57:2281-2289, 1997.

72. Arvilommi A-M, Salmi M, Airas L, Kalimo K, Jalkanen S. CD73 mediates lymphocyte binding to vascular endothelium in inflamed human skin. **Eur J Immunol** 27:248-254, 1997.

73. Uksila J, Salmi M, Butcher EC, Tarkkanen J, Jalkanen S. Function of lymphocyte homing-associated adhesion molecules on human natural killer and lymphokine-activated killer cells. **J Immunol** 158:1610-1617, 1997.

74. Salmi M, Rajala P, Jalkanen S. Homing of mucosal leukocytes to joints. Distinct endothelial ligands in synovium mediate leukocyte-subtype specific adhesion. **J Clin Invest** 99:2165-2172, 1997.

75. Airas L, Niemelä J, Salmi M, Puurunen T, Smith DJ, Jalkanen S. Differential regulation and function of CD73, a glycosyl-phosphatidylinositol-linked 70-kD adhesion molecule, on lymphocytes and endothelial cells. **J Cell Biol** 136:421-431, 1997.

76. Salmi M, Tohka S, Berg EL, Butcher EC, Jalkanen S. Vascular adhesion protein 1 (VAP-1) mediates lymphocyte subtype-specific, selectin-independent recognition of vascular endothelium in human lymph nodes. **J Exp Med** 186:589-600, 1997.

77. Arvilommi A-M, Salmi M, Jalkanen S. Organ-selective regulation of vascular adhesion protein-1 expression in man. **Eur J Immunol** 27:1794-1800, 1997.

78. Ristamäki R, Joensuu H, Lappalainen K, Teerenhovi L, Jalkanen S. Elevated serum CD44 level is associated with unfavorable outcome in non-Hodgkin's lymphoma. **Blood** 90:4039-4045, 1997.

79. Salmi M, Smith DJ, Bono P, Leu T, Hellman J, Matikainen M-T, Jalkanen S. A mouse molecular mimic of human vascular adhesion protein-1 (VAP-1). **Mol Immunol** 34:1227-1236, 1997.

80. Wuorela M, Jalkanen S, Kirveskari J, Laitio P, Granfors K. *Yersinia enterocolitica* serotype O:3 alters the expression of serologic HLA-B27 epitopes on human monocytes. **Infect Immun** 65:2060-2066, 1997.

81. Bono P, Salmi M, Smith DJ, Jalkanen S. Cloning and characterization of mouse vascular adhesion protein-1 reveals a novel molecule with enzymatic activity. **J Immunol** 160:5563-5571, 1998.

82. Salmi M, Hellman J, Jalkanen S. The role of two distinct endothelial molecules, vascular adhesion protein-1 and peripheral lymph node addressin, in the binding of lymphocyte subsets to human lymph nodes. **J Immunol** 160:5629-5636, 1998.

83. Hänninen A, Jaakkola I, Jalkanen S. Mucosal addressin is required for the development of diabetes in nonobese diabetic mice. **J Immunol** 160:6018-6025, 1998.

84. Kirveskari J, Jalkanen S, Mäki-Ikola O, Granfors K. Increased synovial endothelium binding and transendothelial migration of mononuclear cells during *Salmonella* infection. **Arthritis Rheum** 41:1054-1063, 1998.

85. Smith DJ, Salmi M, Bono P, Hellman J, Leu T, Jalkanen S. Cloning of vascular adhesion protein-1 reveals a novel multifunctional adhesion molecule. **J Exp Med** 188:17-27, 1998.

86. Ristamäki R, Joensuu H, Hagberg H, Kalkner KM, Jalkanen S. Clinical significance of circulating CD44 in non-Hodgkin's lymphoma. **Int J Cancer** 79:221-225, 1998.

87. Kurkijärvi R, Adams DH, Leino R, Möttönen T, Jalkanen S, Salmi M. Circulating form of human vascular adhesion protein-1 (VAP-1): increased serum levels in inflammatory liver diseases. **J Immunol** 161:1549-1557, 1998.

88. Bono P, Salmi M, Smith DJ, Leppänen I, Horelli-Kuitunen N, Palotie A, Jalkanen S. Isolation, structural characterization, and chromosomal mapping of the mouse vascular adhesion protein-1 gene and promoter. **J Immunol** 161:2953-2960, 1998.

89. Jaakkola K, Knuuti J, Söderlund K, Saraste A, Jalkanen S, Voipio-Pulkki L-M. Labelling lymphocytes with techenetium^{99m}-hexamethyl propyleneamine oxime for scintigraphy: an improved labelling procedure. **J Immunol Methods** 214:187-197, 1998.

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91. Wuorela M, Tohka S, Granfors K, Jalkanen S. Monocytes that have ingested *Yersinia enterocolitica* serotype O:3 acquire enhanced capacity to bind to nonstimulated vascular endothelial cells via P-selectin. **Infect Immun** 67:726-732, 1999.

92. Bono P, Jalkanen S, Salmi M. Mouse vascular adhesion protein-1 (VAP-1) is a sialoglycoprotein with enzymatic activity and is induced in diabetic insulitis. **Am J Pathol** 155:1613-1624, 1999.

93. Jaakkola K, Kaunismäki K, Tohka S, Yegutkin, G, Vänttinen E, Havia, T, Pelliniemi LJ, Virolainen M, Jalkanen S, Salmi M. Human vascular adhesion protein-1 in smooth muscle cells. **Am J Pathol** 155:1953-1965, 1999.

94. Salmi M, Tohka S, Jalkanen S. Human vascular adhesion protein-1 (VAP-1) plays a critical role in lymphocyte-endothelial cell adhesion cascade under shear. **Circ Res** 86:1245-1251, 2000.

95. Jaakkola K, Nikula T, Holopainen R, Vähäsilta T, Matikainen M-T, Laukkanen M-L, Huupponen R, Halkola L, Nieminen L, Hiltunen J, Parviainen S, Clark MR, Knuuti J, Savunen T, Kääpä P, Voipio-Pulkki LM, Jalkanen S. *In vivo* detection of vascular adhesion protein-1 in experimental inflammation. **Am J Pathol** 157:463-471, 2000.

96. Jaakkola K, Jalkanen S, Kaunismäki K, Vänttinen E, Saukko P, Alanen K, Kallajoki M, Voipio-Pulkki L-M, Salmi M. Vascular adhesion protein-1, intercellular adhesion molecule-1 and P-selectin mediate leukocyte binding to ischemic heart in humans. **J Am Coll Cardiol** 36:122-129, 2000.

97. Kirveskari J, Bono P, Granfors K, Leirisalo-Repo M, Jalkanen S, Salmi M. Expression of α_4-integrins on human neutrophils. **J Leukoc Biol** 68:243-250, 2000.

98. Kurkijärvi R, Yegutkin G, Gunson BK, Jalkanen S, Salmi M, Adams DH. Circulating soluble vascular adhesion protein 1 accounts for the increased serum monoamine oxidase activity in chronic liver disease. **Gastroenterology** 119:1096-1103, 2000.

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100. Airas L, Niemelä J, Jalkanen S. CD73 engagement promotes lymphocyte binding to endothelial cells via a lymphocyte function-associated antigen-1-dependent mechanism. **J Immunol** 165:5411-7, 2000.

101. Yegutkin G, Henttinen T, Jalkanen S. Extracellular ATP formation on vascular endothelial cells is mediated by ecto-nucleotide kinase activities via phosphotransfer reactions. **Faseb J** 15:251-260, 2001.

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Surface glycoproteins involved in homing. **Fundamental Mechanisms in Mucosal Immunology and Immunological Diseases of the Gastrointestinal Tract.** Berlin, Germany 12-15.9.1990.

Mononuclear cell function and intestinal infections. **Cross Talk Between Epithelial Cells and Microbes, ASCB, EMBO**, Arolla, Switzerland 18-23.8.1991.

Multifunctional properties of CD44. **British Connective Tissue Society Meeting,** Lancaster, 23-24.9.1991.

Leukocyte-endothelial cell recognition properties of tumor infiltrating lymphocytes. **Immune Response and Immunotherapy in Cancer**, Turku, Finland 15-16.5.1992.

Multifunctional nature of homing-associated antigens. **FECTS Meeting**, Davos, Switzerland 13-17.7.1992.

Aberrant endothelial cell binding properties of lamina propria lymphocytes in inflammatory bowel diseases. **7th International Congress of Mucosal Immunology**, Praque, Czechoslovakia 16-20. 8.1992.

A novel endothelial cell molecule mediating lymphocyte binding in humans. **The Vascular Endothelium in Inflammation.** Elmau, Germany 11-15. 10. 1992.

New adhesion molecules involved in lymphocyte binding to endothelium. **EMBO Workshop on Cell-Cell Interactions in Leukocyte Homing and Differentiation.** Basel, Switzerland 1-4. 11.1992.

Adhesion molecules in lymphocyte homing. **British Society for Immunology Meeting**, Liverpool, England 14-16.4.1993.

Lymphocyte traffic in inflammation. **Cells, Signals, and Adhesion Mechanisms in Inflammation.** 19-20.4.1993.

Vascular adhesion protein-1 (VAP-1) - a new homing-associated molecule. **ENII Meeting: Integrated Function of Molecules of the Immune System.** Les Embiez, France 12-16.5.1993.

New adhesion molecules in lymphocyte binding to endothelium in inflammatory diseases. **XXXV Symposium of the Society for Histochemistry**. Cargellen/Montafon, Austria 29.9.-3.10.1993.

Adhesion molecules in rheumatoid arthritis. **Cell Adhesion. Regulation and Clinical Prospects**. Amsterdam, the Netherlands 13-16.10.1993.

The VAP molecules in lymphocyte homing. **ENII Meeting**, Les Embiez, France 18-22.5.1994.

Leukocyte trafficking: potential for drug development. **The 15th Sigrid Juselius Symposium: Arthritis and Autoimmunity**, Turku, Finland 25-29.5, 1994.

Structure and function of vascular adhesion protein-1. **Brook Lodge Conference on Adhesion Molecule Biology**, Augusta, Michigan, USA 11-14.6. 1994.

Vascular adhesion proteins (VAPs) in lymphocyte endothelial cell interactions. **European Immunolgy Meeting**, Barcelona, Spain 15-18.6.1994.

Lymphocyte-endothelial interaction, tissue specific homing. **Scandinavian Immunology Meeting**, Reykjavik, Iceland 13-18.8. 1994.

Molecules controlling homing of mucosal lymphocytes. **British Society for Immunology Meeting**, Harrogate, England 5-7.12.1994.

Homing receptors and tissue-specific recruitment of lymphocytes. **British Society for Immunology Meeting**, Birmingham, 27-30.3.1995.

Molecules controlling homing of mucosal lymphocytes. **Scandinavian Society for Immunology**, Gothenborg, Sweden 25-28.5.1995.

Molecules controlling homing of mucosal lymphocytes. **Scandinavian Congress of Gastroenterology**, Uppsala, Sweden 29-31.5.1995.

Adhesion molecules in cutaneous inflammation. **Scandinavian Congress of Dermatology**, Turku, Finland 15-18.6.1995.

The role of vascular adhesion protein-1 (VAP-1) and lymphocyte-vascular adhesion protein-2 (CD73) in inflammation. **Molecular Mechanisms of Inflammation**, Rottach-Egern, Germany 6-9, 1995.

Molecular mechanisms mediating lymphocyte homing of mucosal lymphocytes. **European Research Conference:** Castelvecchio Pascoli, Italy 30.9-5.10, 1995.

Multifunctional nature of CD44. **Paterson Symposium**, Manchester, England 29.10-1.11.1995.

Leukocyte homing to vascular wall. **EVBA Symposium**, Gothenburg, Sweden 30.5-2.6, 1996.

Leukocyte migration in inflammation. **XIX Nordic Congress on Allergology**, Helsinki, Finland 10-13.8, 1996.

Why leukocytes migrate into synovium. **4th European Conference on Pediatric Rheumatology**, Helsinki, Finland 18-21.8, 1996.

The role of adhesion molecules in the spread of malignancies and in immunotherapy. **The sixth Robert Steel Foundation Symposium on Biology of Metastasis**, New York, USA 17-20.9.1996.

Homing properties of mucosal lymphocytes. **Immunology of Infections II: Oral and other Mucosal Vaccines**, Giens, France 11-16.10.1996.

Regulation of lymphocyte trafficking: the role of Vascular Adhesion Protein-1 and CD73. **Biochemical Society/British Society for Immunology Joint Congress**, Harrogate, England 10-13.12.1996.

Regulation of lymphocyte trafficking - thr role of carbohydrates. **Glycobiology of Cell Communication**, Helsinki, Finland 20-21.12.1996.

Lymphocyte homing mechanisms linking gut immunity and infamed joints. **International Conference on Immunopathology of Mucous Membranes and Exocrine Glands**, Bergen, Norway 13-16.5.1997.

Regulation of trafficking of NK cells. **IV International Workshop of the Society for Natural Immunity**, Helsinki, Finland 28-31.5.1997.

Regulation lymphocyte trafficking - role of VAP-1 and CD73. **Molecular Mechanisms of Inflammation**, Rottach-Egern, Germany 7-10.9.1997.

The role of mucosal lymphocytes in diabetes and arthritis. **Cell Adhesion and Migration in Inflammation and Cancer**, Amsterdam, the Netherlands 22-25.10.1997.

Selectins and addressins. **Meeting of Swedish Medical Doctor Association**, Stockholm, Sweden 28.11.1997.

Regulation of Lymphocyte trafficking: **Keystone Symposia: Molecular Mechanisms of Leukocyte Trafficking**. Lake Tahoe, California, USA 22-28.3.1998.

Adhesion molecules. **Annual Meeting of the Swiss Society for Allergology and Immunology**, Geneva, Switzerland 16-18.4.1998.

Lymphocyte homing. **Beckman Meeting of Inflammation**, Regensburg, Germany 16-19.9.1998.

Organ-specific regulation of lymphocyte trafficking. **40. Symposium of the Society for Histochemistry**, Giessen, Germany 22-25.9.1998.

Mechanisms regulating cell homing in gut and synovium. **First International Congress on Spondylarthropathies**, Gent, Belgium 22-26.9.1998.

Regulation of lymphocyte homing. **Annual Meeting of the French Society for Immunology**, Paris, France 25-27.11.1998.

Cell trafficking and joint disease. **Cutting Edge Rheumatology. The 1999 Frank Wollheim Symposium**, Lund, Sweden 7.5.1999.

CD44 as a prognostic marker in cancer. **16th International Conference on Human Tumor Markers.** Budapest, Hungary 13-16.6.1999.

Role of adhesion molecules in differentiation and dedifferentation. **Regulation of Cell Growth and Differentiation**. Murikka, Finland 8-9.10.1999.

Immunology in the New Millenium. **Multiple Sclerosis 2000**, Turku, Finland 1-2.6.2000.

Enzymatic activity of human vascular adhesion protein-1 (VAP-1): the role at site of inflammation. **9th Amine Oxidase Workshop**. Barcelona, Spain 9-12.7.2000.

Novel molecules regulating lymphocyte exit. **The 31st Scandinavian Meeting for Immunology**, Majvik, Finland 23-27.8.2000.

Role of mucosal lymphocytes in the development of reactive arthritis. **28th Scandinavian Congress of Rheumatology**, Turku, Finland 7-10.2000.

Homing of mucosal lymphocytes. **8th United European Gastroenterology Week**. Brussels, Belgium 25-30.11.2000.

Trafficking of mucosal lymphocytes. **Mucosal Immunity – Role in Local Defence and Immunopathology**, Oslo, Norway 2-4.2, 2001.

The role of lymphocyte homing in health and disease. **XVIII British Society for Rheumatology Meeting**, Edinburgh, Scotland 24-27.4.2001.

Adhesion molecules in inflammation. **13th ERCSG-meeting**, Maijvik, Finland 10-12.5.2001.

Role of amine oxidase activity in the development of diabetic vasculopathies. **Angiogenesis and Vascular Biology**, Helsinki, Finland 11-12.5.2001.

Regulation of leukocyte trafficking. **EMBO New Members Meeting**, Heidelberg, Germany 19-22.5.2001.

Therapeutic approaches for targeting adhesion molecules in human diseases. **11th International Congress of Immunology**, Stockholm, Sweden 22-27.7.2001.

Control of leukocyte extravasation: involvement of enzymatic activity. **5th World Congress of Inflammation**, Edinburgh, Scotland 22-26.9.2001.

Adhesion-related receptors in malignancies and immunotherapy. **4th European Workshop on Basic Biology of Head and Neck Cancer**, Amsterdam, the Netherlands 4-6.10.2001.

A cell surface amine oxidase directly controls leukocyte trafficking. Protein derived cofactors, radicals and quinones. **Gordon Research Conference**, Ventura, California, USA 13-18.1.2002.

Enzymatic control of leukocyte trafficking. **Lymphocyte Traffic and Homeostasis Conference**, Newport Beach, California, USA 8-10.2.2002.

Entrance and exit mechanisms regulating lymphocyte trafficking. **Scandinavian Society for Immunology meeting**. Bergen, Norway 24-27.4.2002.

Control of lymphocyte entrance to and exit from the tissues. **ELSO Meeting.** Nice, France 29.6-3.7.2002.

Molecules mediating lymphocyte exit from the tissues. **International Symposium: Molecular mechanisms in Leukocyte Trafficking**, Ringberg, Germany 22-25.9.2002.

Enzymatic control of leukocyte-endothelial cell interactions – a new targeting mechanism. **Conference of the Network for Inflammation Research**, Lund, Sweden 29.9-1.10.2002.

From the bench to bed side. Recent breakthroughs in drug development, **BioCity Symposium**, Turku, Finland 22-23.8.2002.

Adhesion-molecule based therapy in joint inflammation. **Falk Workshop**. Cell Adhesion Molecules in Health and Disease. Berlin, Germany 23-24.1.2003.

New insights to lymphocyte entrance to and exit from the tissues. **EURESCO Conference**: B Cells in Health and Disease, Acquafredda di Maratea, Italy 10-15.5.2003.

Leukocyte trafficking. **NORFA conference**: Translational medicine in the field of autoimmunity, Sweden 14-20.8.2003.

Adhesion molecules and cancer spread. **Collegium Oto-Rhino-Laryngologicum Amicitiae Sacrum**, Helsinki, Finland 24-27.8.2003.

Entrance and exit mechanisms in cell trafficking: possible targets to combat inflammation and cancer. **Cell-Matrix Interactions in Cell Invasion**, Helsinki, Finland 12.9.2003.

Blocking inflammation with anti-adhesion antibodies. **Swiss Society for Allergy and Immunology Meeting**, Geneva, Switzerland 15-16.4.2004

New adhesion molecules in lymphatic leukocyte transport. **Cellular Interactions in the Immune System**, Geneva, Switzerland 17-18.4.2004.

Vascular adhesion molecules in inflammation and metastasis. **Fourth ESH Interdisciplinary Euroconference on Angiogenesis**, Helsinki, Finland 21-24.5.2004.

Entrance and exit mechanisms of lymphocytes. **12th International Congress of Immunology**, Montreal, Canada 18-23.7.2004.

Entrance and exit mechanisms of leukocyte trafficking in the gut. **6th EFIS Tatra Immunology Meeting**, Tatranske Zruby, Slovakia 11-16.9.2004.

Control of leukocyte traffic. **Crafoord Symposium**, Lund, Sweden 20.9.2004.

Control of leukocyte traffic. **Crafoord Symposium**, Stockholm, Sweden 21.9.2004.

VAP-1. **Keystone Symposium**, Taos, New Mexico, USA 1-6.3.2005.

Leukocyte trafficking – a central element in the host defence. 30th **International Herpesvirus Workshop**, Turku, Finland 30.7-4.8.2005.

Molecular mechanisms of lymphocyte migration 36th **Scandinavian Meeting for Immunology**, Kiel, Germany 21-24.9.2005.

Ectoenzymes in control of leukocyte traffic. **Systems Biology Symposium**, Turku, Finland 7.10.2005.

Lymphocyte homing to the gut. **Per Brandtzaeg –symposium**, Oslo, Norway 9-10.6.2006.

Targeting mechanisms of cell traffic within the lymphatics. **Gordon Conferens**: Molecular Mechanisms in Lymphatic Function and Disease, Les Diablerets, Switzerland 3-8.9.2006.

Cell surface enzymes in the control of migration. **4th ZOO meeting**, Amsterdam, the Netherlands 4-7.10.2006.

Are trafficking molecules possible targets in head and neck cancer? **5th European Workshop on Basic Biology of Head and Neck Cancer**, Poznan, Poland 16-18.10.2006.

Molecular Mechanisms of cell traffic within lymphatics. **9th Imperial College Symposium**: Vascular Endothelium. London, England 23.11.2006.

Molecular mechanisms regulating lymphocyte traffic within lymphatics. **EMBO Conference**: Shaping immunity in healthy and diseased tissues. Capo Caccia, Sardinia 7-12.5.2007

Immune cell communication. **EFIS-EJI Course on Autoimmunity.** Tartu, Estonia 3-7.6.2007.

Endothelial cell in inflammation. **Course on Tissue Polysaccharides in Inflammation**, Rautavaara, Finland 28.11-1.12, 2007.

Ectoenzyme-mediated leukocyte recruitment. **Keystone Symposium,** Keystone, Colorado, USA, 13-18.1.2008

Lymphocyte homing to the gut: attraction, adhesion and commitment. **MIVAC meeting** on Mucosal barrier functions and the role of IgA, Gothenburg, Sweden, 19-22.1.2008

Leukocyte trafficking: attraction, adhesion, commitment. **Cellular and Molecular Immunology Minisymposium**, Helsinki, Finland 5.5.2008

New players in lymphocyte recirculation. **Rocky Mountain Meeting**, Hamilton, USA, 20-24.7.2008

Trafficking molecules: any role in angiogenesis. **Angiogenesis in Cancer and Cardiovascular Diseases**, Helsinki, Finland, 28-29.8.2008

Cell trafficking/migration via lymphatics. **Ringberg meeting** on Molecular Mechanisms of Leukocyte Traffic, Schloss Ringberg, Germany 3-6.9.2008

Molecular mechanisms regulating lymphocyte traffic within lymphatics. **EMBO Meeting**, Tampere, Finland 5-8.9.2008

Ectoenzymes in leukocyte trafficking. **NAD 2008**. Hamburg, Germany, 14-17.9.2008

Ectoenzymes in leukocyte trafficking. **USEGB 2009**, Interlaken, Switzerland, 28-29.1.2009

Multifunctional nature of vascular adhesion protein-1 in the development and its vascular complications. **30th Annual Meeting of the Endocrine Society and the Diabetes Association**, Taipei, Taiwan 21-22.3.2009